

Inventor: Criscione, et al.
Title: Gripper Devices

Abstract

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Apparatuses and methods of picking up items from a first location and selectively releasing those items at one of multiple desired second locations are provided in which an item is either pierced, clamped, or stuck to a gripper without using vacuum pressure to maintain the grasp between the item and the pickup device. In several embodiments the items are grasped by piercing probes such as an expandable needle, a barbed needle or a screw. In other embodiments the items are clamped by tweezers or a gear and fingers combination. In a final embodiment, an item is grasped by being frozen to a temperature controllable surface.